

1 1. (Amended) A method for programming a mobile telephone over the air within a  
2 mobile telephone communication network, said mobile telephone communication network includes  
3 an over-the-air function, a customer service center, a mobile switching center, a base station  
4 controller, and a plurality of base transceiver stations, said method comprising the steps of:

5 establishing a communication path between a mobile telephone and the over-the-air  
6 function, wherein the communication path includes an over the air path between said mobile  
7 telephone and one of said plurality of base transceiver stations;

8 sending a request from the over-the-air function to said mobile telephone via the  
9 communication path to interrogate said mobile telephone's operating capabilities;

10 in response to a detection of said request, said mobile telephone responding via the  
11 communication path to the over-the-air function with a protocol capability response message that  
12 describes the band and mode capabilities of said mobile telephone;

13 the over-the-air function determining operational parameters for said mobile telephone  
14 based upon the band and mode capabilities of said mobile telephone;

15 the over-the air function communicating the operational parameters to said mobile  
16 telephone via the communication path; and

17 said mobile telephone subsequently operating according to the operational parameters.

18 [sending a request over the air to a mobile telephone by one of said plurality of base  
19 transceiver stations within said mobile telephone communication network to interrogate said mobile  
20 telephone's protocol capability; and

21 in response to a detection of said request, responding with a protocol capability response  
22 message over the air by said mobile telephone to said one of said plurality of base transceiver

23 stations, wherein said protocol capability response message includes a BAND\_MODE\_CAP field  
24 describing band and mode capability information of said mobile telephone.]

1 2. (Amended) The method according to Claim 1, wherein [said] the protocol  
2 capability response message includes a BAND\_MODE\_CAP field [further] that includes an  
3 analog cellular band subfield describing analog cellular band operations supported by said mobile  
4 telephone, a digital cellular band subfield describing cellular band operations supported by said  
5 mobile telephone, and a digital personal communication service band subfield describing  
6 personal communication service band operations supported by said mobile telephone.

1 3. (Amended) The method according to Claim 1, wherein the operational parameters  
2 include [said BAND\_MODE\_CAP field is utilized to generate] a preferred roaming list and a  
3 number assignment module indicator block that [are specific to] were selected by the over-the-air  
4 function based upon the band and mode capabilities of said mobile telephone's band and mode  
5 capabilities.

1 4. (Amended) The method according to Claim 1, wherein said protocol capability  
2 response message further [includes a NUM\_SO field describing] describes a number of service  
3 options [available to] supported by said mobile telephone.

1 5. (Amended) The method according to Claim 4, wherein: ✓  
2 said protocol capability response message includes a NUM\_SO field that indicates a

3 number of service options supported by said mobile telephone;

4 for each of the number of service options supported by said mobile telephone, the ✓  
5 protocol capability response message [further] includes a [at least one] SERVICE\_OPTION  
6 field, wherein each SERVICE\_OPTION field indicates a service option supported by said mobile  
7 telephone.

1 6. (Amended) The method according to Claim 5, wherein the over-the-air function  
2 uses the contents of the protocol capability response message to provision services for [said at  
3 least one SERVICE\_OPTION field is utilized to initiate an appropriate provisioning of] said  
4 mobile telephone.

1 7. (Amended) The method according to Claim [5] 6, wherein data from the protocol  
2 capability response message is used [said BAND\_MODE\_CAP field and from said at least one  
3 SERVICE\_OPTION field are sent to said customer service center] for said mobile telephone's  
4 service [a] provisioning [of] at said mobile telephone's [a] home location register.

1 8. The method according to Claim 1, wherein said mobile telephone communication  
2 network may be an advanced mobile phone service or a code-division multiple access mobile  
3 telephone communication network.

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1 9. (Amended) A mobile telephone communication system for programming a mobile  
2 telephone over the air within a mobile telephone communication network, said mobile telephone  
3 communication network includes an over-the-air function, a customer service center, a mobile  
4 switching center, a base station controller, and a plurality of base transceiver stations, said mobile  
5 telephone communication system comprising:

6 means for establishing a communication path between a mobile telephone and the over-the-  
7 air function, wherein the communication path includes an over the air path between said mobile  
8 telephone and one of said plurality of base transceiver stations;

9 means for sending a request from the over-the-air function to said mobile telephone via the  
10 communication path to interrogate said mobile telephone's operating capabilities;

11 means for said mobile telephone responding via the communication path to the over-the-air  
12 function with a protocol capability response message that describes the band and mode capabilities  
13 of said mobile telephone;

14 means for the over-the-air function determining operational parameters for said mobile  
15 telephone based upon the band and mode capabilities of said mobile telephone;

16 means for the over-the air function communicating the operational parameters to said  
17 mobile telephone via the communication path; and

18 means for said mobile telephone subsequently operating according to the operational  
19 parameters.

20 [means for sending a request over the air to a mobile telephone within said mobile  
21 telephone communication network to interrogate said mobile telephone's protocol capability; and

22 means for receiving a protocol capability response message over the air sent by said mobile

23 telephone, in response to a detection of said request, to said one of said plurality of base transceiver  
SUB 24 stations, wherein said protocol capability response message includes a BAND\_MODE\_CAP field  
25 describing band and mode capability information of said mobile telephone.]

1 10. (Amended) The mobile telephone communication system according to Claim 9,  
2 wherein [said] the protocol capability response message includes a BAND\_MODE\_CAP field  
3 [further] that includes an analog cellular band subfield describing analog cellular band operations  
4 supported by said mobile telephone, a digital cellular band subfield describing cellular band  
5 operations supported by said mobile telephone, and a digital personal communication service  
6 band subfield describing personal communication service band operations supported by said  
7 mobile telephone.

1 11. (Amended) The mobile telephone communication system according to Claim 9,  
2 wherein the operational parameters include [said BAND\_MODE\_CAP field is utilized to  
3 generate] a preferred roaming list and a number assignment module indicator block that [are  
4 specific to] were selected by the over-the-air function based upon the band and mode capabilities  
5 of said mobile telephone[’s band and mode capabilities.

1 12. (Amended) The mobile telephone communication system according to Claim 9,  
2 wherein said protocol capability response message further [includes a NUM\_SO field describing]  
3 describes a number of service options [available to] supported by said mobile telephone.

1 13. (Amended) The mobile telephone communication system according to Claim 12,  
2 wherein:

3 said protocol capability response message includes a NUM\_SO field that indicates a  
4 number of service options supported by said mobile telephone;

5 for each of the number of service options supported by said mobile telephone, the  
6 protocol capability response message [further] includes a [at least one] SERVICE\_OPTION  
7 field, wherein each SERVICE\_OPTION field indicates a service option supported by said mobile  
8 telephone.

1 14. (Amended) The mobile telephone communication system according to Claim 13,  
2 wherein the over-the-air function uses the contents of the protocol capability response message to  
3 provision services for [said at least one SERVICE\_OPTION field is utilized to initiate an  
4 appropriate provisioning of] said mobile telephone.

1 15. (Amended) The mobile telephone communication system according to Claim [13]  
2 14, wherein data from the protocol capability response message is used [said  
3 BAND\_MODE\_CAP field and from said at least one SERVICE\_OPTION field are sent to said  
4 customer service center] for said mobile telephone's service [a] provisioning [of] at said mobile  
5 telephone's [a] home location register.

1 16. The mobile telephone communication system according to Claim 9, wherein said  
2 mobile telephone communication network is a code-division multiple access mobile telephone

3 communication network.

1 17. (Amended) A mobile telephone within a mobile telephone communication network,  
2 said mobile telephone communication network includes an over-the-air function, a customer  
3 service center, a mobile switching center, a base station controller, and a plurality of base  
4 transceiver stations, said mobile telephone comprising:

5 means for establishing a communication path with the over-the-air function, wherein the  
6 communication path includes an over the air path between said mobile telephone and one of said  
7 plurality of base transceiver stations;

8 means for receiving a request from the over-the-air function to said mobile telephone via the  
9 communication path to interrogate said mobile telephone's operating capabilities;

10 means for responding via the communication path to the over-the-air function with a  
11 protocol capability response message that describes the band and mode capabilities of said mobile  
12 telephone;

13 means for receiving operational parameters from the over-the-air function via the  
14 communication path, wherein the operational parameters are based upon the band and mode  
15 capabilities of said mobile telephone as reported in the protocol capability response message; and

16 means for subsequently operating said mobile telephone according to the operational  
17 parameters received from the over-the-air function.

18 [means for receiving a request over the air from one of said plurality of base transceiver  
19 stations within said mobile telephone communication network to interrogate said mobile  
20 telephone's protocol capability; and

21 means for sending a protocol capability response message over the air, in response to a  
22 detection of said request, to said one of said plurality of base transceiver stations, wherein said  
23 protocol capability response message includes a BAND\_MODE\_CAP field describing band and  
24 mode capability information of said mobile telephone.]

1 18. (Amended) The mobile telephone according to Claim 17, wherein [said] the  
2 protocol capability response message includes a BAND\_MODE\_CAP field [further] that  
3 includes an analog cellular band subfield describing analog cellular band operations supported by  
4 said mobile telephone, a digital cellular band subfield describing cellular band operations  
5 supported by said mobile telephone, and a digital personal communication service band subfield  
6 describing personal communication service band operations supported by said mobile telephone.

1 19. (Amended) The mobile telephone according to Claim 17, wherein said protocol  
2 capability response message further [includes a NUM\_SO field describing] describes a number  
3 of service options [available to] supported by said mobile telephone.

1 20. (Amended) The mobile telephone according to Claim 19, wherein:  
2 said protocol capability response message includes a NUM\_SO field that indicates a  
3 number of service options supported by said mobile telephone;  
4 for each of the number of service options supported by said mobile telephone, the  
5 protocol capability response message [further] includes a [at least one] SERVICE\_OPTION  
6 field, wherein each SERVICE\_OPTION field indicates a service option supported by said mobile



7 telephone.

1 Please add the following new claims:

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1 --21. The mobile telephone according to Claim 17, wherein the operational parameters  
2 include a preferred roaming list and a number assignment module indicator block that were  
3 selected by the over-the-air function based upon the band and mode capabilities of said mobile  
4 telephone.--

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1 --22. The mobile telephone according to Claim 19, wherein the over-the-air function  
2 uses the contents of the protocol capability response message to provision services for said  
3 mobile telephone.--

1 --23. The mobile telephone according to Claim 22, wherein data from the protocol  
2 capability response message is used for said mobile telephone's service provisioning at said  
3 mobile telephone's home location register.--

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1 --24. A method of operating a mobile telephone within a mobile telephone  
2 communication network, said mobile telephone communication network includes an over-the-air  
3 function, a customer service center, a mobile switching center, a base station controller, and a  
4 plurality of base transceiver stations, said method comprising the steps of:  
5 establishing a communication path with the over-the-air function, wherein the  
6 communication path includes an over the air path between said mobile telephone and one of said

7 plurality of base transceiver stations;

8 receiving a request from the over-the-air function to said mobile telephone via the  
9 communication path to interrogate said mobile telephone's operating capabilities;

10 responding via the communication path to the over-the-air function with a protocol  
11 capability response message that describes the band and mode capabilities of said mobile telephone;

12 receiving operational parameters from the over-the-air function, wherein the operational  
13 parameters are based upon the band and mode capabilities of said mobile telephone contained in the  
14 protocol capability response message; and

15 subsequently operating said mobile telephone according to the operational parameters  
16 received from the over-the-air function.--

1 --25. The method according to Claim 24, wherein the protocol capability response.  
2 message includes a BAND\_MODE\_CAP field that includes an analog cellular band subfield  
3 describing analog cellular band operations supported by said mobile telephone, a digital cellular  
4 band subfield describing cellular band operations supported by said mobile telephone, and a  
5 digital personal communication service band subfield describing personal communication service  
6 band operations supported by said mobile telephone.--

1 --26. The method according to Claim 24, wherein the operational parameters include a  
2 preferred roaming list and a number assignment module indicator block that were selected by the  
3 over-the-air function based upon the band and mode capabilities of said mobile telephone.--